Title: METHOD AND SYSTEM OF TAPE AUTOMATED BONDING

# REMARKS

This responds to the Office Action dated September 13, 2003.

No claims are amended or cancelled. Claims 7-13 and 20-25 are pending in this application.

## §102 Rejection of the Claims

Claims 7-9, 11, 12 and 20-25 were rejected under 35 U.S.C. § 102(b) as being anticipated by Buckley, III, et al. (U.S. Patent No. 5,477,082).

### Claims 7-9 and 20-22

Applicant traverses the rejection of claims 7-9 and 20-22. "Anticipation requires the presence in a single prior reference disclosure of each and every element of the claimed invention, arranged as in the claim." *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1984). Applicant believes the cited reference does not include each and every element of the claimed invention, arranged as in the claim. For instance, Applicant cannot find in the cited reference an electrical component mounted on or above a surface of the IC chip and electrically connected to the IC chip via "a lead on the TAB leadframe which extends outward from the electrical component to a perimeter I/O of the IC chip." In contrast, Buckley discusses a double-sided structure where the devices 56, 58A, 90 are connected to each other and contacts 24A of a leadframe through vias 22. (See Figs. 3 and 6 of Buckley).

In the Response to Arguments section of the Office Action, the Examiner states that Buckley discloses component 94 being mounted above/below a surface of the IC chip and electrically connected "to the IC chip via respective lead pads/leads, which extend outward ... from the second IC chip/electrical component to the perimeter bonding pads/I/O pads IC chip." However, this subject matter is not disclosed in the Buckley reference. In contrast, in Buckley it appears the only connection between the two IC chips (e.g. 56, 90 in Fig. 6) is through via holes 22. There is no indication that the leads connected to chip 90 extend *outward* from chip 90 to a perimeter I/O of chip 56. Accordingly, the cited reference does not include a lead on the TAB

#### RESPONSE UNDER 37 CFR § 1.116 – EXPEDITED PROCEDURE

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leadframe which extends outward from the electrical component to a perimeter I/O of the IC chip, as recited in claim 7.

Claims 8, 9, and 20-22 include each limitation of their parent claim and are therefore also not anticipated by the cited reference. Reconsideration and allowance is respectfully requested.

#### Claims 11, 12, and 23-25

Applicant traverses the rejection of claims 11, 12, and 23-25. Applicant believes the cited reference does not include each and every element of the claimed invention, arranged as in the claim. For instance, Applicant cannot find in the cited reference: wherein at least one of the plurality of leads is internally routed relative to the ILB area so that the at least one lead has a contact exposed interior to the ILB portion of the TAB structure and above a major surface of the IC chip; and an electrical component mounted on or above the major surface of the IC chip and electrically connected to the IC chip via the at least one lead which has a contact exposed interior to the ILB portion of the TAB structure and above a major surface of the IC chip.

Again, Buckley discusses a double-sided structure where the devices 56, 58A, and 90 are connected to each other and contacts 24A of a leadframe through vias 22. (See Figs. 3 and 6 of Buckley). The leads are not internally routed as asserted by the Examiner; they are merely vertical vias, as discussed above. Accordingly, the cited reference does not include at least one lead internally routed relative to the ILB area so that the at least one lead has a contact exposed interior to the ILB portion of the TAB structure and above a major surface of the IC chip, as recited in claim 11.

Claims 12 and 23-25 include each limitation of their parent claim and are therefore also not anticipated by the cited reference. Reconsideration and allowance is respectfully requested.

# §103 Rejection of the Claims

Claims 10 and 13 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Buckley, III, et al. (U.S. Patent No. 5,477,082) in view of admitted prior art (APA). Claims 10 and 13 include each limitation of their parent claims and are not obvious in view of the cited references for the reasons given above. Reconsideration and allowance is respectfully requested.

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## **CONCLUSION**

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney (612) 359-3267 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal 

Name

Signature